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October 19, 2000

Mr. Brian Brown
Assistant Regional Administrator
Hydro Division
National Marine Fisheries Service
525 N.E. Oregon Street, Suite 500
Portland, Oregon 97232

Dear Mr. Brown:

The Northwest Power Planning Council has received and reviewed the July 27, 2000 Draft Biological Opinion for the Operation of the Federal Columbia River Power System. We have also reviewed the July 27, 2000 Draft Basin-wide Salmon Recovery Strategy (the "All -H" paper) developed by the federal caucus, of which the National Marine Fisheries Service (NMFS) is a participant. As you know, the Council is charged by the Pacific Northwest Electric Power Planning and Conservation Act of 1980 with developing a Columbia basinwide program to protect, mitigate and enhance fish and wildlife. We are currently in the process of amending that program, and are desirous of further coordinating our plan with those being developed under the Endangered Species Act. Toward that end, the Council offers the following comments on the draft Biological Opinion for your consideration.

1. *Coordinating the implementation of the actions called for in the Biological Opinion/Reasonable and Prudent Alternative with the implementation of the regional Columbia River fish and wildlife program.*

The Council is pleased to see and supports the language in section 9.5 of the draft that states that the development and implementation of the five-year and one-year plans will be coordinated through existing processes. Mentioned specifically in section 9.5 is the annual prioritization conducted by the Council under the Northwest Power Act. The Council believes that its prioritization process is well designed to coordinate ESA needs with other Bonneville fish and wildlife funding obligations, and that this can be the principle device for coordinating implementation among the many jurisdictions involved in the salmon restoration and recovery effort.

The Council considers clear implementation planning to be the key factor in any recovery or restoration strategy. Implementation relies on successful anticipation of decision-making schedules, timely identification of funding needs, and full participation of the involved governmental agencies and the public. The Council's experience in developing a formal decision-making sequence for the

implementation of the Fish and Wildlife Program offers a number of themes, highlighted below, for collaborative implementation of the Fish and Wildlife Program and the Biological Opinion.

Our collective goal should be a collaborative sequence of implementation definition and review: The Council is committed to collaboration with the National Marine Fisheries Service and the Fish and Wildlife Service in meeting the requirements of the Endangered Species Act and the Northwest Power Act. In the Council's view, collaboration requires full and continuous engagement by the Council, the Action Agencies and the federal fisheries services. Our respective staffs should define a full sequence of review through the ongoing schedule of implementation planning and a means for the elevation of points of policy dispute in a timely manner. Based upon the language of section 9.5, the Council is hopeful that NMFS and the Action Agencies are committed to precisely this sort of collaboration. We would welcome the opportunity to work with NMFS to more specifically detail the planning and implementation provisions of the final Biological Opinion.

The Council can incorporate the Biological Opinion's sequence for implementation planning into fish and wildlife program implementation planning: The draft Biological Opinion sets out a sequence of five-year and one-year implementation plans. These are to be developed by the Action Agencies. The Council sees this sequence of planning, particularly the one-year plans, as "check-in" points to verify that the Council's schedule for implementation planning and program funding will address the requirements of the biological opinion as well as the objectives of the Program.

The Council is working through an initial schedule of implementation planning on a province-by-province review. This new province-based review schedule permits a focused and considered scientific review and public involvement on Bonneville fish and wildlife funding decisions. The province based review and approval process being used will lead to longer periods of funding approval -- from the current annual recommendations for funding to recommendations that will in most instances span three years.

In implementing the coordination language of section 9.5 of the draft, the Council believes that it is critical that the Action Agencies' first five-year implementation plan specifically consider the provincial review schedule, and identify where decisions concerning Biological Opinion implementation must be made within those reviews. For example, the Council's process will conduct its review of the smolt-monitoring program during a schedule of systemwide monitoring programs. The five-year implementation plan should consider that schedule and in its review, the NMFS should verify that the schedule is timely. If not, NMFS should at that time propose an alternative schedule. It is essential that the federal fisheries services and the Action Agencies plan with full recognition of the Council's decision-making schedule and quickly alert us where the timing for funding decisions does not support the Biological Opinion requirements. This timely participation and integration will be far more effective and regionally acceptable than the alternative of waiting for the regional prioritization process to run its course in any given year, only to have ESA-based needs layered on at the end of the process.

In addition, the initial five-year implementation should include a specific summary of ongoing fish and wildlife program activities for review of consistency and coverage of Biological Opinion requirements. Two central questions should be considered. First, are ongoing activities in conflict with the biological opinion and if so, what remedies should be considered by the Council and project sponsors? Second, should ongoing activities be expanded or accelerated? In many cases, the earliest actions addressing the Biological Opinion should come from existing fish and wildlife program projects where environmental review is likely to be in place and supporting staff

already funded. Said another way, the Council expects that much of the activity that is currently being funded by Bonneville in fish and wildlife program implementation already consistent with the Biological Opinion or may be able to serve ESA needs. We should seek to expeditiously identify those consistencies.

Similarly, the one-year implementation plan fits with the Council's schedule for delivering an Annual Implementation Work Plan (AIWP) to Bonneville for program funding. The AIWP confirms project budgets for the following fiscal year. In a collaborative implementation process, this annual work plan will serve as the basis for confirming that the Council's work plan also satisfies Bonneville's off-site mitigation responsibilities. Again, fisheries agencies and Action Agencies should work to define their ESA-based needs within the context of these work plans.

The conduct of the Council's review of the Bonneville reimbursable programs should also frame Biological Opinion implementation decisions for those programs. As directed by Congress, the Council is incorporating its review responsibilities for the reimbursable programs into the sequence of provincial reviews initiated this year. The review format and timing for these programs will be identical with that of the general direct program.

Again, the Council believes that it is most appropriate for the federal fisheries agencies and Action Agencies participate at all stages of the regional prioritization process as they to identify their ESA based needs that they seek Bonneville funding. We believe that that accountability and coordination is fostered by defining ESA based annual needs concurrent with Bonneville's other fish and wildlife obligations, and with the full public and independent scientific review provided in the regional prioritization process established through the Northwest Power Act. We believe that the draft biological opinion makes this commitment. We would appreciate the opportunity to work further with you on the details of this integration as you prepare a final document.

Recovery planning and implementation can benefit from the Council's review process which provides stakeholder participation, independent scientific review and public comment: The National Marine Fisheries Service and Bonneville both recently commented to the Council that the subbasin planning process and project selection decisions must consider other management plans, particularly land and water management, and involve state and local governments in the decision-making process.

The Council agrees, and is initiating its subbasin planning process with consideration of broader management objectives and expanded involvement. The collaborative implementation planning process described above is essential to winning the participation and commitment of other management agencies and state and local participants. The development of subbasin plans (and in the interim, subbasin summaries) requires the active review and comment by the federal fisheries services. We view the provisions of the "All H Paper" that identify the Council as a lead entity for subbasin assessment and planning as significant federal support for the planning initiative that the Council has been pursuing.

For four years, independent scientific review has been a key asset to the Council's implementation process. The Power Act now requires independent review for Bonneville project funding, and the Council takes pride in the function of its Independent Scientific Review Panel (ISRP). The ISRP will continue to play the central review role in the schedule of provincial reviews and project selection. We believe that ESA-based measures or actions should be subject to the same level of review, and will benefit from it.

Finally, the Council process also provides for public comment. Public comment, particularly from essential cooperators is invaluable to charting the proposed course of implementation and identifying remaining policy or implementation concerns. Our experience is that the fullest review of implementation plans supports expedited project initiation and completion. We believe that this too will benefit the Biological Opinion and conceptual recovery plan implementation.

2. *Bonneville's responsibility for funding actions called for in the Biological Opinion/Reasonable and Prudent Alternative and the "All H" paper.*

The Council sees a pressing need to reconcile the approach outlined in the Biological Opinion with the Council's fish and wildlife program, particularly on issues of priority and funding. The biological opinion and "All H" paper designation of "priority subbasins" as candidates for early implementation of four types of actions (see Draft All-H paper, page 4) to assist endangered and threatened species demonstrates the need for such a reconciliation. For example, the document does not specify how these actions would be funded, other than mentioning Bonneville as a "bridge funding" source. We anticipate that Bonneville will be asked to provide significant additional funding to address the needs of listed Columbia basin species. However, we are concerned that other federal agencies have not secured their funding responsibilities to contribute to the overall salmon recovery effort.

Because the Council's fish and wildlife program is designed to benefit all fish and wildlife in the basin affected by the hydrosystem, it has been addressing listed species through a number of actions. Some portion of the approximate $130 million annual budget for the direct program over the last five years has benefited species of concern under the Endangered Species Act. In fact, in administering the 1996 Fish and Wildlife Budget Memorandum of Agreement, Bonneville set aside about $30 million exclusively for measures that might be required by the 1995-1998 Biological Opinion. Today, about $2.5 million remains. The Council believes that it is important to remain mindful of the substantial contribution that Bonneville has been made to listed species and expects to make in the future. In preparation for the 2002-2006 contract period, Bonneville included increases in fish and wildlife spending ranging from $5 million up to $286 million.

The Council believes that Bonneville's funding obligation for ESA is part of its overall fish and wildlife responsibilities under the Northwest Power Act, and therefore tied to the adverse impacts caused by the hydrosystem. While Bonneville's obligation and financial resources may be significant, Bonneville funds should not be the exclusive source of ESA funding in the Columbia basin. Bonneville funds for ESA based actions should be combined with funds from other entities, especially federal agencies, that have legal and financial obligations to protect and enhance threatened and endangered species. The Council supports using the Bonneville fund for "off-site" mitigation as called for in the draft ESA documents and as permitted by the Northwest Power Act. However, the Bonneville fund has limits. While Bonneville fish and wildlife funds can be used for off-site mitigation, the Power Act does not permit them to be used "in lieu" of funding responsibilities of other entities. In addition, the Council notes that Bonneville's funding as part of its overall fish and wildlife funding obligations is limited by its ability to ensure the region an adequate, economical, efficient, and reliable power supply.

Federal agencies carry some of the responsibility for the loss of salmon and their habitat through the actions of the National Marine Fisheries Service, U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Bureau of Reclamation, and the Forest Service, quite distinct from the

hydropower system. Therefore some part of the financial responsibility for recovering endangered fish in the Columbia Basin rests with the federal government.

We believe that the Administration should prepare and submit for Congress' consideration a supplemental appropriations request for Fiscal Year 2001 for actions that address the reasonable and prudent alternatives proposed in the draft biological opinions, and should be prepared to continue to secure such funds for future years. Further, the Council urges NMFS and the Action Agencies to work with it to integrate ESA based needs with others to be funded by Bonneville in a way that permits Bonneville to meet all of its fish and wildlife obligations in a cost-effective manner. The Council also desires to see NMFS and the Action Agencies diligently seek congressionally approved expenditures for ESA required actions that are not attributable to the hydrosystem.

3. *Performance Standards*

The Council supports the concept of performance standards, and agrees that the three types of standards identified in section 9.1.1 are useful approaches for monitoring the effectiveness of implementing recovery actions. However, the Council finds that the performance standards in the draft ESA documents are ill-defined and incomplete at this time. This is not surprising. Rather, we expect that specific performance standards will be identified and completed as we move forward with the subbasin assessment/planning process outlined in the "All H" paper. Further, as the "lead agency" for that process, the Council is committed to working with NMFS in the development of biological objectives at the provincial, ESU and subbasin level. These biological objectives should form the basis for the performance standards needed to monitor the effectiveness of implementing the ESA based measures.

In the interim, the Council suggests that performance standards and biological objectives could focus on progress in setting up the necessary infrastructure to assure that subbasin assessments and plans will be developed within a timeframe that provides for adequate protection of the resource. We would see this as a type of "programmatic standard" as defined at section 9.1.1. Similarly, defining and agreeing upon the planning and implementation process for coordinating and funding ESA-based requirements in the regional prioritization process as discussed in Item 1 above is another type of programmatic performance standard that could be developed in the near term.

4. *The effect of assumptions made about the relationship between the effectiveness of spawning salmon of hatchery origin and average population growth rate changes (lambda) needed to meet jeopardy standard metrics.*

We would encourage NMFS to clarify its view of how the presence of naturally spawning "hatchery origin" salmon may affect achieving ESA section 7(a)(2) jeopardy standard metrics. The draft seems to indicate that when "hatchery origin" fish successfully reproduce in the natural environment, the positive change in the annual population growth rate (lambda) to achieve the "survival" or "risk of extinction" jeopardy standard metric for most up-river ESUs will need to be dramatic. This dynamic is most evident in tables A5a through A5d and A6a through A6d. In those tables, ESUs and specific populations are identified, along with their corresponding current average population growth rate (lambda), the risk of extinction in 24- and 100-year periods, the change needed in lambda to reduce the risk of extinction to 5 percent. This final column, the change in lambda to reduce extinction risk to 5 percent is of particular significance given that NMFS will principally rely on this "risk of extinction" or "survival metric" as an indicator of status relative to the jeopardy standard (section 6.3).

The tables in the A5 and A6 series could be interpreted to suggest that any "hatchery-origin" adult that spawns alongside listed stocks, regardless of its life history pattern or genetic makeup, have in the past depressed the growth rate of listed populations and that this is presumed to continue into the future. In other words, the tables could be interpreted to conclude that all "hatchery-origin spawners" are detrimental to the recovery of listed populations. If this is NMFS' conclusion, there are serious management implications that must be considered by the federal caucus, the Council, and the region.

We believe that the A5 and A6 tables (and table 9.2-1) may simply be an attempt to back-calculate average population growth rates based on historical data sets with varied assumptions about the past effectiveness of hatchery fish spawning. However, the text of the draft does not make that clear. Rather, we are concerned that the tables considered in the context of the jeopardy standard discussion in section 1.3, the effects of the proposed action in section 6.3, and in context of the narrative generally, risk leaving the reader with the belief that NMFS universally views naturally spawning salmon with some amount or type of "hatchery influence" as an impediment to achieving the jeopardy standard survival metric. This interpretation is likely incorrect because it would be inconsistent with the actions called for by NMFS and the federal caucus to use conservation and supplementation hatcheries as a tool to assist in the survival and recovery of listed populations.

On a related but slightly different issue, the phrase "naturally spawning hatchery-origin" fish as used in the above referenced tables should be defined with clarity. Does this phrase refer to naturally spawning "strays" from another population or ESU hatched and/or reared using artificial techniques of any kind? Or rather, does this phrase refer to naturally spawning fish that have been hatched and/or reared using artificial techniques of any kind that are in fact managed to return to the same stream as a listed population? Does it mean something else? Moreover, does it matter when the artificial influence occurred within the lineage of the fish? That is, are naturally spawning first, second, third, and so on generation progeny of a parent classified as "hatchery origin" (however that is defined) always considered "hatchery origin," or is there some point where a naturally spawning subsequent generation "counts" for ESA purposes? These types of definitional questions and the differing interpretations currently offered plague scientists, managers, and the public on a daily basis -- what is the definition of "hatchery origin," "wild" "listed" "natural" "indigenous" and so on? NMFS would do a great service by clearly defining these terms for its purpose of ESA implementation in the final document.

Finally, we support additional research that will help identify and quantify the extent of hatchery impacts on naturally spawning populations. Long-term research is needed on the relationship of hatchery fish to the fitness and productivity of indigenous populations. This area of research must be increased to help us use artificial production wisely in the Columbia Basin.

5. *Power impacts associated with the hydrosystem operation standards and actions.*

One of the Northwest Power Planning Council's planning responsibilities is to "assure the Pacific Northwest an adequate, efficient, economical and reliable power supply." It is mandatory, therefore, for the Council to examine the potential impacts that any fish and wildlife recovery plan may have on the Northwest's power system.

Preliminary results of our analysis indicate that implementing the mainstem hydro operation strategy in the draft 2000 Biological Opinion should not significantly reduce the adequacy or

reliability of the power system.[1] Annual hydroelectric generation will be reduced by about 75 average megawatts (aMW) relative to the 1998 Biological Opinion operation. For perspective, the total regional hydroelectric generation averages about 15,800 aMW.[2] The 1998 Biological Opinion operation reduces hydroelectric generation by about 1,150 aMW relative to a pre-Council strategy.[3]

Of concern was the newly added proposed operation for chum salmon, which would increase flows and energy production in November but reduce flows and generation in the winter months. Analysis shows that, on average, generation in November increases by about 1,400 aMW while the December and January generation decreases by about 1,000 and 1,400 aMW respectively. The initial concern was that the reduction in energy production in the winter months would exacerbate an already critical time for the power system. Preliminary results, however, show that the 2000 Biological Opinion operation has a minimal affect on reliability. The likelihood of a winter event[4] remains at about 24 percent[5] (for the 2003 operating year) while the magnitude of the loss increases slightly. More analysis is required to fully assess the impacts to reliability.

Another concern is the increased spill requirements, particularly in the summer months. The loss of generation at John Day or The Dalles dams reduces the transfer capability of the interties.[6] Increasing spill requirements will reduce generation and further stress the transmission network. Again, further analysis is required to determine the impacts more precisely.

In order to take into consideration the Council's obligations, it is recommended that some language be included in the draft 2000 Biological Opinion that deals with adequacy and reliability. Four points should be made:

1. In emergency situations (summer or winter), fish and wildlife operations can be curtailed.
2. The option of curtailing fish and wildlife operations during emergencies should not be used in lieu of establishing an adequate and reliable power system.
3. The option of curtailing fish and wildlife operations should be viewed as a last-resort action. An emergency protocol should be developed that incorporates not only curtailment of fish and wildlife operations but also whatever other actions could be helpful to alleviate the situation.
4. Proposed new resources (whether generating or demand-side) that integrate more effectively with fish and wildlife operations should be given highest priority.

We suggest adding the following language in the appropriate place in the 2000 biological opinion:

To ensure the reliability of the power supply, power system operators may curtail fish and wildlife operations temporarily during emergency situations. For example, an emergency can occur due to a major temperature drop like those experienced in 1989 and 1990 or due to the loss of a

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[1] It should be noted, however, that there are concerns about the adequacy and reliability of the existing power system. See the Council document, "NW Power Supply Adequacy/Reliability Study Phase I Report," Paper number 2000-4, March 6, 2000.

[2] "Northwest Regional Forecast of Power Loads and Resources," Pacific Northwest Utilities Conference Committee, March 1998, p72.

[3] The pre-Council operation includes no special operations for fish and wildlife, such as flow augmentation or spill.

[4] A winter event means a period of time (as short as an hour) when firm demands could not be served during the December through February period.

[5] See the Council's publication, "NW Power Supply Adequacy/Reliability Study Phase I Report," Paper number 2000-4, March 6, 2000.

[6] "Transmission System Impacts of Drawing Down John Day Dam," Memorandum from John Fazio to the Council members, Document number 98-3, February 25, 1998.

major resource like the Columbia Generating Station nuclear plant or a large Grand Coulee unit or due to the loss of the Northern or Southern interties. Fish and wildlife operations may also be temporarily curtailed if the Northwest power system is called on to alleviate an emergency in other areas of the Western Interconnected System or if it is necessary to maintain a stable transmission system. All involved parties should collaborate to establish a workable definition of an "emergency."

A predetermined protocol should also be established that defines actions to be taken during emergency situations. All existing and operational resources, including those in other areas of the Western Interconnected System, should be dispatched prior to curtailing fish and wildlife operations. All efforts should also be made to relieve the emergency using demand-side resources, including requests for customers to voluntarily cut back use. Curtailing fish and wildlife operations should be viewed as a last-resort action and should never be done solely for economic reasons. During winter emergencies, water being held in reservoirs for spring and summer flow augmentation may be drafted. Once the emergency is resolved, any flow augmentation water used should be replaced as soon as possible, to the extent possible. During summer emergencies, bypass spill for fish may be curtailed or reduced, or reservoirs may be drafted below biological opinion limits.

Having the option of curtailing fish and wildlife operations during emergency situations should not be used in lieu of maintaining an adequate and reliable power system. A reliability standard for fish and wildlife operations should be established in collaboration with power system agencies. If curtailments to fish and wildlife operations exceed this standard, the power system should be re-evaluated. If the Northwest power system is deemed to be inadequate or unreliable, new resources (whether generating or demand-side) should be developed to bring the system up to expected standards. Priority should be given to resources that integrate more effectively with fish and wildlife operations.

The Council appreciates the opportunity to comment on the draft biological opinion. The document evidences a tremendous amount of work on the part of NMFS, while also candidly recognizing that we have a monumental challenge in restoring fish, wildlife, and their habitats in the Columbia basin. We look forward to coordinating our efforts towards that end, and hope that the above comments are found useful.

Sincerely,

Frank L. Cassidy, Jr.
Chairman

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